PROGRESS

OF

MEDICAL SCIENCE.

THERAPEUTICS.

UNDER THE CHARGE OF

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ARSENIC AS A DRUG.

IN a lecture on this subject DR. JONATHAN HUTCHINSON points out some of the conditions under which this remedy is of especial service. It appears to possess specific power in persisting pemphigus. As a rule, no fresh bullæ are produced after the administration of the arsenic has been commenced, and the patient quickly regains health, with perfect soundness of skin.

In the treatment of common psoriasis, although the effect of arsenic is quite as definite and certain as in pemphigus, it is not nearly so immediately curative. Sometimes its effects are first manifested by the patches taking on a congested condition, and becoming very irritable. In a large majority of cases it will in the end, if well pushed, cause the eruption almost wholly to disappear. It seldom or never brings about a complete cure, and of late years we have been so much accustomed to reinforce it by efficient local measures that it is not always easy to estimate the proportion of our indebtedness to it.

As a tonic arsenic should be used only in small doses. In elderly persons, unless the disease imperatively demands it, it should not be prescribed. With the young, arsenic appears usually to agree well, and even very young children, although they but seldom need it, will bear full doses without ill effects. Amongst the facts which have been thoroughly established as regards the possible effects of arsenic it may be claimed that it is an undoubted cause of peripheral neuritis. Its influence in inducing herpes zoster, when given for the cure of other skin diseases, affords the most common example of this. It has been observed by those studying cases of poisoning by arsenic, and is especially noted by Christison, that local and unsymmetrical forms of paralysis not very infrequently result. During its medicinal use patients not infrequently complain of local numbness, more especially of portions of the skin of the lower extremities. Numbness and tingling of the soles of the feet are by no means infrequent symptoms.

It is a very important question, especially in reference to chronic skin diseases requiring its use during long periods, whether arsenic is prejudicial or otherwise to the general health. If given in small doses, with the exception of the risk that it may cause shingles, its effects are usually inappreciable, and there is no danger of its cumulative influence. If arsenic be given in full doses for long periods, although it may be doubted whether there is any reason for styling it a cumulative drug, its employment is not without danger. There are certain symptoms which ought to lead us to take alarm. If the patient has numbness of any particular part of the skin, or if there be decided loss of flesh, then it ought to be suspended. Irritation of the conjunctiva is, of course, a well-known symptom of disagreement, but it may not be observed as frequently as some of the others just mentioned, and to them may be added a liability to diarrhœa, and, in a certain number of cases, extreme irritability of the bladder.

Under regular medical supervision a patient cannot well receive injury to his general health from arsenic. If, however, a patient who has received great relief from his skin affection has obtained a prescription which he uses on his own responsibility, and with perhaps considerable increase in the dose ordered, it is then possible that serious or even fatal results may ensue.

As regards the influence of arsenic on the skin in persons previously healthy: Now and then we have opportunities to observe its action upon the skin when it is prescribed for maladies quite apart from the skin itself. Its effects upon the nutrition of the skin, if the doses are large, is to make it brown and muddy-looking; it is also dry and harsh on the trunk and limbs generally, although there may be perspiration on the palms and soles. The discoloration may be attended with actual pigmentation, and may increase until it almost resembles the tint of Addison's disease.

In extreme cases not only is there dryness and discoloration, but scaly patches may form on the knuckles, elbows and knees, much resembling common psoriasis, but less well circumscribed. A much commoner result than this is, however, disturbance of the nutrition of the skin, not over the body generally, but over the palms and soles only. On these parts, in addition to dryness, corns may form, and in certain very rare cases these corns pass on into epithelial cancer. A peculiarly dry condition of the palms and soles, with tendency to the formation of corns, is by no means an infrequent result of long-continued courses of arsenic, and should lead to its discontinuance.—*British Medical Journal*, No. 1588, 1891.

OPIATES IN ACUTE PERITONITIS.

DR. STEPHEN SMITH directs attention again to the importance of large doses of opium in treating acute peritonitis.

Under Professor Alonzo Clark's direction he treated six cases in 1840. The patients were seen every hour, the pulse and respiration closely watched. The quantity of opium was to be determined by the effects produced, not at all by the amount administered. The condition of the patient to be secured was that of semi-narcotism; this was to be determined by the degree of stupor and the respiration; the patient must require to be shaken to be aroused to consciousness; and the respiration might fall to twelve per minute, but not below that figure.

At the outset each patient received one grain of opium every hour for three doses. No effect being perceptible, the dose was increased to two grains every hour, and continued for three doses. Failing with this dosage, the opium was increased to three grains every hour. In four cases this amount of opium had the desired effect, and it was continued in that amount. In the remaining cases it had to be increased to four grains every hour. One of these remaining cases yielded to this amount, and the opiate was continued at that rate. The sixth case was much more obstinate, and the opium was steadily increased until the dose reached was twelve grains every hour. This amount simply secured a light but continuous sleep, from which she readily awoke on placing the hand upon her wrist to examine her pulse.

The first four cases continued to receive three grains of opium every hour for three or four days, when the pulse fell to its normal standard, the tympanites subsided, the tenderness of the abdomen disappeared, and the patients were evidently convalescent. The opium was discontinued. They rapidly recovered and remained well.

In the fifth case, on the fourth night the patient was given so much opium, four-grain doses, that she was too deeply narcotized; she was without pulse, pale, and with only four respirations per minute. Active measures were taken to recover the patient from her profound narcotism. After several hours of continuous effort she was regarded as securely restored. All symptoms of peritonitis now rapidly subsided; the pulse had fallen from 112 to 92 per minute, the tympanites and tenderness had disappeared, and she expressed herself as feeling well. Within twenty-four hours all evidences of peritonitis recurred, and the treatment was renewed, three grains of opium being given instead of four. Semi-narcotism was readily produced, and after a brief period the symptoms again subsided; the treatment was suspended, and she was perfectly cured.

The sixth case proved an anomaly in tolerance of opiates. During twelve days the treatment was persevered in, the pulse remaining at about 120, the respirations 34 to 36, the abdomen greatly distended and tender to the touch, lancinating pains, the features pinched, perspiration at intervals, etc. During these twelve days the patient took the equivalent of 1950 grains of opium, and she neither vomited during that time nor had an evacuation from her bowels. At no time was she so narcotized that she would not awaken when a hand was placed upon her wrist. She remained in the hospital as an assistant in the laundry for six months after her recovery, and during that time she was in excellent health.

Professor Clark thus describes the method of medication: The plan is to begin with a dose that is safe, say two or three grains of opium, or its equivalent of sulphate of morphine, and in two hours notice its effect. If any of the opium symptoms have appeared, repeat the dose, if not, increase by one grain, and so on at intervals of two hours till the degree of tolerance in the patient is ascertained. After that the case can be treated by a diminished occupation of the physician's time—two or three visits a day. The dose is to be increased if the opium symptoms diminish, or discontinued if narcotism is approaching. The duration of the treatment will be sometimes no more than two or three days; it may be a week, or even a fortnight; and in one case the symptoms persisted mildly for forty days and then yielded. In this case the medicine used was sulphate of morphine, and the enormous dose reached, by steady and gradual increase, was one grain and a quarter every forty minutes, in a boy ten years old.

Of the several signs of opiumism there is none more valuable than the frequency of the respiration; and while the physician aims to reduce it to twelve in a minute, there are chances that he will see it fall to something below that.

Professor Clark does not explain the curative action of opium in peritonitis, but Professor Fordyce Barker, who had a large and varied experience in puerperal peritonitis in Bellevue, considered opium the most important of all agents in arresting and controlling this disease. By it the peristaltic movements are retarded or arrested, and thus the inflamed tissues have absolute rest, pain is annulled, emotional excitement is allayed, the nervous system is tranquillized, sleep is secured, and thus the depression of the vital forces resulting from the shock of the attack is lessened.—*Medical Record,* vol. xxxix., No. 22, 1891.

CACTINA.

Cactina is the proximate principle of the plant Cereus grandiflora, which is indigenous in tropical America. It is unirritating, a 10 per cent. solution applied to the conjunctiva produces no noticeable effect.

It is thought to increase the heart's energy and increase the blood-pressure in this way and also through stimulation of the vasomotor centre. It is said to resemble strychnine in its action upon the motor centres of the cord.

Clinical observation suggests that its greatest value is manifest in functional disturbances of the heart, as simple dilatation and cardio-muscular atony, without organic lesions. A special indication for its use is during the critical periods of adynamic fevers, as it combines the elements of a heart and spinal motor stimulant.

Unlike digitalis, cactina may be administered continuously without fear of exciting gastric disturbance, and the objectionable cumulative action of the former drug is entirely absent. It may be employed in all varieties of functional cardiac disease and circulatory disturbances, and in organic heart disease, except in cases of mitral stenosis, where digitalis is to be preferred on account of its power of prolonging the diastolic period. In aortic insufficiency the short diastole produced by cactina allows no time for regurgitation of blood into the ventricle, whereas digitalis, by prolonging the diastolic period, favors just what we should seek to prevent.—*New York Medical Journal,* vol. liii., No. 24.

HÆMORRHOIDS.

Iodide of potassium	ʒss.
Iodine	grs. viij.
Glycerin	℥j.

Small plugs of cotton steeped in this solution are applied every three or four hours to the piles.

By this treatment the inflammation subsides, and the hæmorrhoids diminish rapidly in volume, and finally disappear.—*Medical Press*, June, 1891.

MEDICINE.

UNDER THE CHARGE OF

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Sudden Death from Spontaneous Rupture of the Aorta.

Martin-Dürr (*Archives Générales de Médecine*, 1891) reports the case of a woman of eighty-seven, who, two hours after dinner, was suddenly seized with pain in the back, on the left, which apparently subsided under treatment, though a sense of oppression of the chest and slight dyspnœa continued without disturbance of the respiratory rhythm. The intelligence was preserved throughout. Suddenly, two and a half hours later, the pain returned, and death took place immediately by syncope. At the autopsy, between the cæcum and the right kidney was found a cyst as large as an orange, with delicate, translucent walls, containing clear, limpid fluid of lemon-yellow color and highly albuminous. The splenic artery was as large as a little finger, extremely tortuous, nodulated and atheromatous; the liver was small and fatty; the gall-bladder contained a small cubical calculus. On removing the liver no blood flowed from the inferior vena cava. The internal and external iliac arteries and the abdominal aorta were in a high degree atheromatous. The right lung was emphysematous, adherent at the apex, and completely filled the pleural cavity. The pericardium was displaced toward the median line, and the lung pushed forward and upward. The left pleural cavity was filled with an enormous quantity of sanguinolent fluid and considerable clotted blood. The left lung was free, compressed, but crepitant. The pericardium and its cavity were normal. The heart was not hypertrophied, but laden with fat. The walls of the left ventricle were pale and of moderate thickness. The cavity of the heart contained neither fluid blood nor clot. The mitral orifice was normal; on the aortic valves were some calcareous nodules. The aorta was enormously dilated and contained numerous atheromatous patches. At the junction of the horizontal and descending portions, a little beyond the origin of the left subclavian artery, was an extensive opening almost four inches long, transverse to the axis of the vessel,